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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/539,790

06/17/2005

Jutta Arden-Jacob

ARDEN-JACOB-3

4872

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HENRY M FEIEREISEN, LLC

HENRY M FEIEREISEN

708 THIRD AVENUE

SUITE 1501

NEW YORK, NY 10017

EXAMINER

POWERS, FIONA

ART UNIT

PAPER NUMBER

1626

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/539,790	<b>Applicant(s)</b> ARDEN-JACOB ET AL.	
	<b>Examiner</b> Fiona T. Powers	<b>Art Unit</b> 1626	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 May 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4,6-8,13-24 and 26-37 is/are pending in the application.
- 4a) Of the above claim(s) 13,14,16-20 and 26-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4, 6-8, 15, 21-24 and 34-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

Claims 4, 6-8, 13-24, and 26-37 are pending in the application.

Receipt is acknowledged of the amendment filed May 13, 2009, which has been entered in the file.

***Election/Restrictions***

Applicant's election with traverse of Group I (claims 1 to 12, 15 and 21-24 all in part and claims 12 and 15 where Y is oxygen) in the reply filed on August 18, 2008 is acknowledged. The requirement was made final in the previous office action.

Claims 13, 14, 16 to 20 and 26 to 33 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on August 18, 2008.

This application contains claims 13, 14, 16-20 and 26-33 drawn to an invention nonelected with traverse in the reply filed on August 18, 2008. **A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action** (37 CFR 1.144) See MPEP § 821.01.

Art Unit: 1626

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 6-8, 15, 21-24 and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mao et al. (US 6130101), cited.

**Determination of the scope and content of the prior art (MPEP §2141.01)**

The reference discloses structurally similar carboxamide-substituted dyes that are useful as fluorescent probes. The compounds of the reference are structurally similar to the claimed dyes of the formula I wherein Y is oxygen; R<sub>5</sub> and R<sub>6</sub> are each a hydrocarbon group one of which is substituted by a carboxyl group; Cyc1 is unsubstituted or substituted phenyl; Cyc2 is optionally substituted phenyl or has the structure (E); and at least one of the groups that correspond to R<sub>1</sub>, R<sub>1'</sub>, R<sub>3</sub>, R<sub>3'</sub>, R<sub>4</sub>, R<sub>4'</sub>, and R is a sulfo group. Note, for example, Examples 25, 27 and 31 of the reference.

**Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)**

The compounds of the reference differ from those claimed in that the group that corresponds to R<sub>5</sub> or R<sub>6</sub> of the instant invention that is not substituted with a carboxyl group is a hydrogen atom instead of an alkyl group and/or the sulfo group(s) are attached to the compound via a methylene group instead of being directly attached to the molecule and/or that the carboxy group of the instant invention that is attached to R<sub>5</sub> or R<sub>6</sub> is replaced by another reactive functional group such as a maleimide group.

*Finding of prima facie obviousness---rational and motivation (MPEP §2142-2413)*

It has been held that it is obvious to replace a hydrogen atom with an alkyl group. Note In re Wood, 199 USPQ 137, for example. The reference itself teaches that the sulfo group may be attached directly or indirectly via a methylene group to the compound. See column 3, lines 13 to 25. The substitution of another reactive group for the carboxyl group of the present invention is also taught by the reference. Note column 13, lines 25 to column 16, line 2. The reference discloses that the spectra of the sulfonated rhodamine dyes of the invention are insensitive to pH changes and that the dyes possess substantially greater water solubility than non-sulfonated analogs. Therefore, one of ordinary skill in the art would have been

Art Unit: 1626

motivated to make the claimed dyes with the expectation that additional dyes with superior properties would be obtained.

### ***Response to Arguments***

Applicant's arguments with respect to claims 4, 6-8, 15, 21-24 and 34-37 have been considered but are moot in view of the new ground(s) of rejection.

The references made of record and not relied upon show the state of the art.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened

Art Unit: 1626

statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fiona T. Powers whose telephone number is 571-272-0702. The examiner can normally be reached on Monday - Friday 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1626

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Fiona T. Powers/  
Primary Examiner, Art Unit  
1626

ftp  
July 28, 2009